# CATS
## CAPITAL AREA TIMEX/SINCLAIR USERS GROUP

# NEWSLETTER
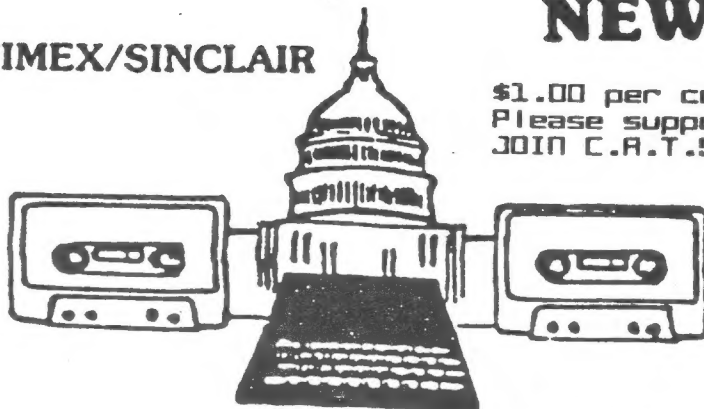
## PLEASE NOTE: MARCH MEETING IS MARCH 5 (FIRST SATURDAY)

## SIG PROGRAMMING MEETING
## FORTH
## DUANE PARKER

## IN THIS ISSUE

## CONTRIBUTORS

Tom Bent                Peter van Dijk
Vernon Smith            Hank Dickson
Duane Parker            Courtney DuBois
LeBaron Washington      Joan Kealy

# PRESIDENTIAL RAMBLINGS

At this month's meeting we will have the first in what we hope will be a series on programming applications and languages on computer. Duane Parker will present the first presentation on programming in Forth. (Forth is available on all Sinclair computers, so consider this talk as computer independent).

Since Forth is conceptually different from programming in most other languages, I for one look forward to hearing Duane's talk. Other ideas were presented at the last meeting as candidates for a group project. One of these ideas that now comes to mind is a window driven front-end program. I recently received the Pointer System Interface, which allows modular, structured flexible front-ends to be developed. If we can get a number of individuals to each tackle a small piece of this task, we may be able to accomplish

one of the more interesting challenges facing computer programmers -- Software Integration.

## DISK DRIVES ANYONE?

Those who are interested in acquiring 3½" or 5¼" disk drives, please let us know. (The time has come to pay up!) We will without a doubt be getting drives NOW!! We already have in excess of 25 drives to buy.

## Z88 UPDATE

I have had a lot of fun recently with my Z88. I have hooked it up to the QL and transferred files with ease and have hooked it up to the Miracle Systems serial to parallel converter and run the parallel printer directly. The only problem I have had so far is the batteries going dead when I was not looking.

# FROM THE EDITOR

Before I step up on my soap box, let's look at what we have assembled in this issue. Since April 15th is rapidly approaching, Barry Washington has revised his 2068 tax program to track the new tax law. QL users should be using Peter Hale's Tax-I-QL/87. Duane Parker has been doing some research on getting data files from MS-DOS machines to the QL and he is sharing the results of his efforts with us.

Well, it finally happened! The bane of all editors caught up with me last month when I left 3 lines out of Peter van Dijk's column. I apologize. I was so intent on using the text entry part of DTP, I didn't think to proofread the page. The missing lines are on page 11.

Peter can't be too angry with me since he sent in his column for this month with some more great designs. The Orlando Computerfest is next month and our Letters column contains a letter that Joan Kealey sent to the organizers. I feel that this newsletter should be a forum for users of all Sinclair computers; therefore, I welcome the opinions of readers like Joan. Look at our Classified Ads. Whenever we can, we will run your ad. There are some great buys, so check them out.

I hope that this issue was not a fluke, in that I received so much material that I wasn't able to include it all. Even Peter's column had to be continued. Keep it up. It certainly makes my job easier.

CHAPTER 2 IN THE "MAKE THE EDITOR'S JOB EASIER SAGA".
Please look at the small box in the lower right hand corner of this page. If you will note, I try to be very flexible when it comes to media used for submissions; however, in the case of submissions prepared on the QL, I will only accept hard copy that has columns 3 1/2" wide. If

you don't know how to set it up, give me a _doc file on disk or microdrive and I'll do the rest. I'm working very hard to upgrade the production standards of the newsletter and hard copy, without a backup disk/cart, with wider columns just won't hack it.

Next month we will make the coveted "Best of 1987" awards for the QL and 2068. If you haven't voted yet, drop me a line.

As I say each month, why not jot something down and submit it to the newsletter. We need contributors. See you at Orlando.

*Vernon*

## AN OPEN LETTER TO ALL USER GROUPS

ONE OF OUR MEMBERS, JOAN KEALY, HAS SENT THE FOLLOWING LETTER TO THE FLORIDA TS FEST ORGANIZERS. EVEN IF YOU DON'T HAVE A 2068 YOU SHOULD GIVE THE UNDERLYING MESSAGE SERIOUS THOUGHT.

SUNSTATE T/S WINTERFEST
SUNSHINE BULLETIN SERVICE
249 N. HARDEN AVE.
ORANGE CITY, FL 32763

Sirs:

I wish to request that you bring before the 5 TSUGS sponsoring the fest the need to acquire SCLDS beyond the 25 you are rumored to be raffling off at the fest. A raffle is fine for those who do NOT need an SCLD yet but for repairmen who cannot even get an answer to their letters to Timex Portugal, the life expectancy of TS2068s is curtailed by the lack. I just talked to Timex Service Center in Little Rock. Thet said they continue to try to take care of TS computers under warranty BUT would sell no SCLDs.

Nothing anyone is doing whether programs, hardware, books, will be of any avail if no SCLDs are available for extending the lifespan of 2068s. So why not try to muster enough customer signatures to pressure Timex Computer Corpse, holder of patents, to release the U.S.-based chip manufacturer from restrictions against sale of SCLDs to repairmen, distributors, TSUGS, and/or TDM--maybe all together could purchase a sizeable order to interest the chip co--any techie can tell you the name of the company that manufactures these specialized chips. Seriously! We have zero drag with Timex as computer customers but they still would like the goodwill we would feel to continue as Timex watch customers. The name's the same even if they bobbed the game. Goodwill gets sensitive to big companies only when big numberss are involved. Signup a petition eloquently expressed at you banquet and send home with TSUGS a son of signup for them to enlist their stay-at-home members. Cutoff date for mailing to Timex should be stated so mail does not dribble in to them.

Heckfire, we are the latest trekkies even to having conventions--if they could revive "Star Trek" why can't we get a hundred or so SCLDs from from the true source with Timex consent? I am not a nervy upstart but rather a dues-paying, newsletter awaiting member of North East Florida TSUG.

Sincerely,

Joan Kealy

## T/S-FEST COMING IN ORLANDO

The SUNSTATE T/S WINTERFEST'88 is almost upon us!! Pertinent data is summarized below:

DATE: March 4-6 (Fri-Sun), 1988.

PLACE: Orlando Marriott
International Drive
South Orlando
305-351-2420

RATES: $90 per single or double (wow!)

VENDORS: All the old favorites will be there.
Foreign vendors (25) have also been invited.

SEASIONS: A fully panoply of T/S topics will be presented.

SPACE: 1,076 guest rooms.
7,000 sq.ft. of exhibit area.
3 heated outdoor pools, 4 lighted tennis courts, hydro pool.

TRAVEL: Image International, Inc. has been chosen to help with travel planning, including airlines, limo's and taxi's.
CAll: 1-800-351-1360.

INFO: Call the Sunstate T/S BBS at 904-775-0093; 8-1-none, 300 baud.

TO REGISTER: Send $5/single, $9/family ($8/$12 on site) to:
Mary-Lynn Johnson, Chairman
Sunstate T/S WinterFest'88
249 N. Harden Avenue
Orange City, Florida 32763

PLANS: You might want to coordinate your travel plans with our CATS I-95 experts, BOB AND AUDREY CURNUTT, 301-439-8756.

# 1987 FEDERAL INCOME TAX    by LeBaron H. Washington

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10 REM ** By R. A.  SCHRACK-1985 **
20 REM ** SURGERY BY  L. H. WASHINGTON-1988
30 REM ** FOR 1987 FED. INC. TAXES
40 REM ** JLO DISC AND CENTRONICS
50 REM ** 80 COLUMN PRINTER
60 REM ***********************
70 REM  1987 FED. INCOME TAX
80 REM ***********************
90 GO TO 140
100 DIM M$(67,23)
110 DIM V(67)
120 LET L39=0: LET L40=0: LET L41=0: LET L42=0: LET L43=0:
LET L44=0: LET L45=0: LET L46=0: LET L47=0
130 GO TO 450
140 CLS: BORDER 5: PAPER 6: INK 9: LET /P=0: CLS
150 PRINT AT 2,5;"Federal Income Tax 1987"
160 PRINT
170 BORDER 1: PAPER 1: INK 9
180 PRINT "Enter number of choice from menu"
190 PRINT
200 PRINT "1. Fresh start "; FLASH 1; " ERASES ALL DATA ";
FLASH 0
210 PRINT "2. Correction run"
220 PRINT "3. Input data listing"
230 PRINT "4. Results listing"
240 PRINT "5. Input data index listing"
250 PRINT "6. Save program on DISC"
260 PRINT
270 BORDER 3: PAPER 5: INK 9
280 PRINT "You will  need the input data index listing
before you make a correction run.          "
290 POKE 23658,8
300 INPUT z
310 CLS
320 IF z=1 THEN GO TO 100
330 IF z=3 THEN GO TO 1870
340 IF z=4 THEN GO TO 2260
350 IF z=5 THEN GO TO 2600
360 IF z=6 THEN GO TO 2940
370 PRINT AT 3,5;"Give index of value to be changed."
380 INPUT k: IF k<=0 OR k>67 THEN GO TO 380
390 PRINT: PRINT "Give new value of ";M$(k);"="
400 INPUT v(k)
410 PRINT v(k)
420 PRINT: INPUT"Enter an ""R"" to recalculate tax or ENTER
for another correction.";K$
430 IF K$="R" then go to 1170
440 CLS: GO TO 370
450 LET M$(1)="1-5 FILING STATUS"
460 LET M$(2)="6a NUMBER OF EXEMPTIONS"
470 LET M$(3)="7  SALARIES, WAGES, TIPS"
480 LET M$(4)="8  INTEREST INCOME"
490 LET M$(5)="9  TAX EXEMPT INTEREST
500 LET M$(6)="10  DIVIDENDS REC'D"
510 LET M$(7)="11  REF. STATE INC. TAX"
520 LET M$(8)="12  ALIMONY RECEIVED"
530 LET M$(9)="13  BUSINESS INCOME"
540 LET M$(10)="14  CAP.GAINS or LOSSES"
550 LET M$(11)="15  OTHER GAIN or LOSS"
560 LET M$(12)="16a PENS. IRA DIST. ETC."
570 LET M$(13)="16b TAXABLE AMT.OF 16a"
580 LET M$(14)="17 RENTS,ROYALTIES, ETC."
590 LET M$(15)="18 FARM INC. or (LOSS)"
600 LET M$(16)="19 UNEMPLOYMENT COMP."
610 LET M$(17)="20a SOCIAL SEC. BENES"
620 LET M$(18)="20b TAXABLE AMT. OF 20a"
630 LET M$(19)="21 OTHER INCOME"
640 LET M$(20)="23 REIMBUR. EMP.BUS.EXP.
650 LET M$(21)="24a YOUR IRA DEDUCTION"
660 LET M$(22)="24b SPOUSE'S IRA DED."
670 LET M$(23)="25 S.E. EMP.HEALTH INS."
680 LET M$(24)="26 KEOGH RETIR. PLAN"
690 LET M$(25)="27 EARLY WITHDRAW PEN."
700 LET M$(26)="28 ALIMONY PAID"
710 LET M$(27)="A1a DOC ANS INS. BILLS"
720 LET M$(28)="A1a MEDICINES AND DRUGS"
730 LET M$(29)="A1b MED. TRANSPORTATION"
740 LET M$(30)="A1c OTHER MED. EXP."
750 LET M$(31)="A5 STATE INCOME TAXES"
760 LET M$(32)="A6 REAL ESTATE TAXES"
770 LET M$(33)="A7 OTHER DEDUCT. TAXES"
780 LET M$(84)="A9 MORTGAGE INTEREST"
790 LET M$(35)="A10 DEDUCTABLE POINTS"
800 LET M$(36)="A11 DEDUCT.INVES.INT."
810 LET M$(37)="A12a OTHER INT PAID"
820 LET M$(38)="A14a CASH CONTRIBUTIONS"
830 LET M$(39)="A14b CASH CONT.OV 3000"
840 LET M$(40)="A15 CONT.OTHER THAN CASH"
850 LET M$(41)="A16 CARRY OVR.PRIOR YEAR"
860 LET M$(42)="A18 CASUALTY-THEFT LOSS"
870 LET M$(43)="A19 MOVING EXPENSES"
880 LET M$(44)="A20 UNREIM.EMP.BUS.EXP."
890 LET M$(45)="A21 OTHER EXPENSES"
900 LET M$(46)="A25 MISC.DED N/S TO 2%"
910 LET M$(47)="32a OV65-ENTR 0,1,2,3,4"
920 LET M$(48)="32b CLMD AS DEP.N=0,Y=1"
930 LET M$(49)="32c MD FILE SEP.N=0,Y=1"
940 LET M$(50)="33 DED. I/D(1) or S/D(2)"
950 LET M$(51)="38 ADDITIONAL TAXES"
960 LET M$(52)="40 CR.CHILD, DEP.CARE"
970 LET M$(53)="41 CR. ELDERLY/DISABLE"
980 LET M$(54)="44 FOREIGN TAX CREDIT"
990 LET M$(55)="45 GEN. BUS. CREDIT"
1000 LET M$(56)="48 DELF EMPLOYMENT TAX"
1010 LET M$(57)="49 ALT. MINIMUM TAX"
1020 LET M$(58)="50 TAX FR.RECAP.INV/CR"
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1030 LET M$(59)="51 S.S. TAX ON TIP INC."
1040 LET M$(60)="52 TAX ON IRA or QRP"
1050 LET M$(61)="54 FED.INC.TAX W/HELD"
1060 LET M$(62)="55 EST. TAX PAYMENTS"
1070 LET M$(63)="56 EARNED INC. CREDIT"
1080 LET M$(64)="57 AMT.PAID W/ EXT REQ."
1090 LET M$(65)="58 EXCESS S.S.TAX W/HLD."
1100 LET M$(66)="59 CRED.FED GAS TAX"
1110 LET M$(67)="60 REG.INVES.COMP.CRED"
1120 FOR I=1 TO 67
1130 PRINT AT 9,1;"ENTER ";M$(I)
1140 INPUT V(I)
1150 CLS
1160 NEXT I
1170 LET TI=0
1180 FOR I=3 TO 19
1190 LET TI=TI+V(I)
1200 NEXT I
1210 LET TI=TI-V(5)-V(12)-V(17)
1220 LET TA=V(20)+V(21)+V(22)+V(23)+V(24)+V(25)+V(26)
1230 LET AGI=TI-TA
1240 LET MY=V(27)+V(28)+V(29)+V(30)
1250 LET MD=MY-.075*AGI
1260 LET MD=INT (MD*100+.05)/100
1270 IF MD<=0 THEN LET MD=0
1280 LET SD=0
1290 GO SUB 2030
1300 PRINT " YOUR ADJUSTED GROSS INCOME IS  $";AGI;" (HIT
ENTER TO CONTINUE)": PAUSE 0: PRINT
1310 LET TD=0
1320 FOR I=31 TO 43
1330 LET TD=TD+V(I)
1340 NEXT I
1350 GO SUB 2970
1360 LET TD=TD+MD-V(37)+(V(37)*.65)+V(46)+TE
1370 IF V(50)=2 THEN LET TD=SD
1380 LET TD=INT (TD*100+.05)/100
1390 LET TAXI=AGI-TD-(1900*V(2))
1400 IF (TAXI>50000 AND V(1)=2) OR (TAXI>50000 AND V(1)=5)
THEN GO TO 1480
1410 IF (TAXI>50000 AND V(1)=1) THEN GO TO 1570
1420 IF (TAXI>50000 AND V(1)=4) THEN GO TO 1650
1430 IF (TAXI>50000 AND V(1)=3) THEN GO TO 1750
1440 PRINT "YOUR TAXABLE INCOME IS $";TAXI;"    USE TAX
TABLES ON PAGES 31-36. ENTER TAX."
1450 INPUT TAX
1460 GO TO 1820
1470 REM CALC. FOR MARRIED FILING JOINTLY
1480 LET TAX=8840
1490 LET MIN=45000
1500 LET TAXR=.35
1510 IF TAXI<90000 THEN GO TO 1780
1520 LET TAX=24590
1530 LET MIN=90000
1540 LET TAXR=.385
1550 GO TO 1780
1560 REM CALC. FOR SINGLE TAXPAYER
1570 LET TAX=5304
1580 LET MIN=27000
1590 LET TAXR=.35
1600 IF TAXI<54000 THEN GO TO 1780
1610 LET TAX=14754
1620 LET MIN=54000
1630 LET TAXR=.385
1640 GO TO 1780
1645 REM CALC. FOR HEAD OF HOUSEHOLD
1650 LET TAX=7550
1660 LET MIN=38000
1680 LET TAXR=.35
1690 IF TAXI<80000 THEN GO TO 1780
1700 LET TAX=22250
1710 LET MIN=80000
1720 LET TAXR=.385
1730 GO TO 1780
1740 REM CALC. FOR MARRIED FILING SEPARATELY
1750 TAX=12295
1760 MIN=45000
1770 LET TAXR=.385
1780 LET TAX=TAX+TAXR*(TAXI-MIN)
1790 LET TAX= (INT (100*TAX))/100
1800 IF L43=L39 THEN LET TAX=TAX
1810 IF L47=L43 THEN GO TO 1840
1820 IF L43>L39 AND L47=0 THEN LET TAX=0
1830 IF L46>L43 THEN LET TAX=0
1840 LET TTAX=TAX+L47+V(56)+V(57)+V(58)+V(59)+V(60)
1850 LET TAXPD=V(61)+V(62)+V(63)+V(64)+V(65)+V(66)+V(67)
1860 LET TAXDUE=TTAX-TAXPD
1870 CLS
1880 LET Z$=""
1890 INPUT "SUMMARY TO (S)CREEN, (P)RINTER OR (M)ENU ";Z$
1900 IF Z$="S" THEN GO TO 1930
1910 IF Z$="P" THEN GO TO 2640
1920 IF Z$="M" THEN GO TO 140
1930 CLS
1940 PRINT AT 2,1;" SUMMARY 1987 FED. INCOME TAX"
1950 PRINT AT 3,1;" ----------------------------"
1960 PRINT AT 5,11;"INPUT DATA"
1970 PRINT AT 6,11;"=========="; PRINT
1980 FOR I=1 TO 67
1990 PRINT M$(I); TAB 24; V(I)
2000 NEXT I
2010 PRINT FLASH 1; INK 9;"PRESS ANY KEY FOR MENU"; FLASH 0
2020 PAUSE 0: GO TO 140
2030 IF V(1)=1 AND V(47)=1 AND V(50)=2 THEN LET SD=3750
2040 IF V(1)=1 AND V(47)=2 AND V(50)=2 THEN LET SD=4500
2050 IF V(1)=2 AND V(47)=1 AND V(50)=2 THEN LET SD=5600
2060 IF V(1)=5 AND V(47)=1 AND V(50)=2 THEN LET SD=5600
2070 IF V(1)=2 AND V(47)=2 AND V(50)=2 THEN LET SD=6200
2080 IF V(1)=5 AND V(47)=2 AND V(50)=2 THEN LET SD=6200
2090 IF V(1)=2 AND V(47)=3 AND V(50)=2 THEN LET SD=6800
2100 IF V(1)=2 AND V(47)=4 AND V(50)=2 THEN LET SD=7400
2110 IF V(1)=3 AND V(47)=1 AND V(50)=2 THEN LET SD=3100
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2120 IF V(1)=3 AND V(47)=2 AND V(50)=2 THEN LET SD=3700
2130 IF V(1)=3 AND V(47)=3 AND V(50)=2 THEN LET SD=4300
2140 IF V(1)=4 AND V(47)=1 AND V(50)=2 THEN LET SD=5150
2150 IF V(1)=4 AND V(47)=2 AND V(50)=2 THEN LET SD=5900
2160 IF V(1)=1 AND V(47)=0 AND V(50)=2 THEN LET SD=2540
2170 IF V(1)=4 AND V(47)=0 AND V(50)=2 THEN LET SD=2540
2180 IF V(1)=2 AND V(47)=0 AND V(50)=2 THEN LET SD=3760
2190 IF V(1)=5 AND V(47)=0 AND V(50)=2 THEN LET SD=3760
2200 IF V(1)=3 AND V(47)=0 AND V(50)=2 THEN LET SD=1880
2210 IF V(50)=1 THEN LET SD=0
2220 RETURN
2230 PRINT #1;"PRESS <ENTER> TO RETURN TO MENU"
2240 PAUSE 0: GO TO 140
2250 PRINT
2260 CLS
2270 PRINT AT 1,7;"SUMMARY OF RESULTS"
2280 PRINT AT 3,5;"1987 FEDERAL INCOME TAX"
2290 PRINT
2300 PRINT "22  TOTAL INCOME";TAB 24;TI
2310 PRINT "29  TOTAL ADJUSTMENTS";TAB 24;TA
2320 PRINT "30  ADJ. GROSS INCOME";TAB 24;AGI
2330 PRINT "A4  MEDICAL DEDUCTION";TAB 24;MD
2340 PRINT "A26 TOTAL DEDUCTIONS";TAB 24;TD
2350 PRINT "36  TAXABLE INCIME";TAB 24;TAXI
2360 PRINT "37  TAX ON INCOME";TAB 24;TAX
2370 PRINT "53  TOTAL TAX";TAB 24;TTAX
2380 PRINT "61  TOTAL PAYMENTS";TAB 24;TAXPD
2390 IF TAXDUE>0 THEN GO TO 2430
2400 LET OP=-TAXDUE
2410 PRINT "62  OVERPAID!";TAB 24;OP
2420 GO TO 2440
2430 PRINT "65  TAX DUE";TAB 24;TAXDUE
2440 PRINT
2450 PRINT INVERSE 1;"IF PRINTOUT OF OUTPUT IS DESIRED,
PRESS ""P"", OTHERWISE PRESS ""M"" FOR MENU.";
INVERSE 0
2460 PAUSE 0: IF INKEY$<>"P" THEN GO TO 140
2470 GO TO 2720
2480 GO TO 140
2490 LET /P=0
2500 LPRINT "INPUT FOR 1987 FED. INCOME TAX"
2510 LPRINT
2520 FOR I=1 TO 67
2530 LPRINT M$(I);TAB 25;V(I)
2540 NEXT I
2550 LPRINT
2560 LPRINT
2570 LPRINT
2580 LPRINT
2590 GO TO 140
2600 FOR I=1 TO 67
2610 LPRINT I;" ";M$(I)
2620 NEXT I
2630 GO TO 140
2640 LET /P=0
2650 LPRINT TAB 1;" SUMMARY 1987 FED. INCOME TAX"
2660 LPRINT TAB 6;"INPUT DATA"
2670 LET /P=0
2680 FOR I=1 TO 67
2690 LPRINT M$(I);TAB 24;V(I)
2700 NEXT I
2710 PRINT
2720 PRINT: PRINT: PRINT
2730 LPRINT: LPRINT: LPRINT
2740 LPRINT TAB 4;"SUMMARY OF RESULTS"
2750 LPRINT"     ===================": LPRINT
2760 LPRINT TAB 2;"1987 FEDERAL INCOME TAX"
2770 LPRINT
2780 LPRINT "22   TOTAL INCOME";TAB 24;TI
2790 LPRINT "29   TOTAL SDJUSTMENTS";TAB 24;TA
2800 LPRINT "30   ADJ. GROSS INCOME";TAB 24;AGI
2810 LPEINT "A4   MEDICAL DEDUCTION";TAB 24;MD
2820 LPRINT "A26  TOTAL DEDUCTIONS";TAB 24;TD
2830 LPRINT "36   TAXABLE INCOME";TAB 24;TAXI
2840 LPRINT "37   TAX ON INCOME";TAB 24;TAX
2850 LPRINT "53   TOTAL TAX";TAB 24;TTAX
2860 LPRINT "61   TOTAL PAYMENTS";TAB 24;TAXPD
2870 IF TAXDUE>0 THEN GO TO 2910
2880 LET OP=-TAXDUE
2890 LPRINT "62  OVERPAID!";TAB 24;OP
2900 GO TO 2920
2910 LPRINT "65  TAX DUE";TAB 24;TAXDUE
2920 LPRINT
2930 GO TO 140
2940 CLS: SAVE/"1040 TX'87" LINE 140
2950 BEEP .25,20: BEEP .5,10: BEEP .25,20
2960 GO TO 140
2970 LET L42=V(52)+V(53)
2980 LET L39=TAX+V(51)
2990 LET L43=L39-L42
3000 IF L43<0 THEN LET L43=0
3010 LET L46=V(54)+V(55)
3020 LET L47=L43-L46
3030 IF L42=0 THEN LET L47=0
3040 IF L47<0 THEN LET L47=0
3050 LET TE=0
3060 LET TE=V(44)+V(45)-(AGI*.02)
3070 IF TE<0 THEN LET TE=0
3080 RETURN
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# HOW TO GET STUFF FROM BIG BLUE,
or MS-DOS to QL File Conversions
by Duane Parker

Once I had learned enough about my QL to handle the applications programs, I began to consider what else I could program the machine to do. I have some coded-graphics, plus text, data-files generated by a program that runs on IBM (or clone) PC. Can a QL program be written to manipulate the text or figures? That sounds like a good project! The first step is to get the MS- DOS files over to the QL format, byte by byte.

[The commands mentioned in this article include those from Tebby's Toolkit II. They are designated with a "*"; the "*" is not part of the command.]

At CATS I learned that the QUANTA library (from Tom Bent) had just such a transfer program in it - "IBM-DISK" by N. Taylor. After buying a copy of this utility, I hauled it into a CATS meeting and tried it out with my MS-DOS disk and a borrowed disk drive (I didn't own one then). "IBM-DISK" requires that the source disk be in the drive before it is executed (EXEC_W or EW*). A menu then appears, showing selections 1)to read the directory of the disk, 2)to copy text files, 3)to copy binary files, 4)to reset to another disk, and 5)to quit. I tried the binary file copy - it did nothing; it didn't even crash the program. The text copy did work - so I got some MS-DOS files onto my MDV's. Back home at my own QL I first programed some procedures to pick out some of the text from the file. It didn't work, after the first few lines of text, it produced garbage. Copying the file to the screen showed that the text was there, just not in the right place. With the use of a PC and the QL I manually checked the differences in QL version and the IBM version of the file, byte by byte (how? - see below). Taylor's program had indeed transferred the file as text - and

stripped out all the carriage returns (CR, char. #13, #0D hex) and MS-DOS's text end-of-file marker (char. #26, #1A hex). In contrast to some other formats, which end text lines with a CR and a line feed (LF, char #10, #0A hex), Q-DOS uses only an LF. Unfortunately, 13 and 26 have other meanings in my files that could not be ignored.

How does one see just what bytes are in a file? (Copying the file to SCR will display the text, but the unprintable characters appear as inverse blanks. VIEW* shows even less - it's best only for Superbasic program listings.) Later versions (3.X) of MS-DOS have a DEBUG utility. It allows one to "dump" a section of a file to the screen - it shows a section of the file in hexadecimal, and prints the readable text, as shown in Figure 1. (DEBUG has other file manipulation features also.) Tebby's Toolkit has a command, GET*, that allows one to write a Superbasic "debug-dump". Briefly, a file is opened as #A, GET* #A \ n, sets the output to byte no. "n", then GET* #A, x : PRINT x,CHR$(x) will print the byte value and the character that it represents. Procedures were written with such a statement in a loop to produce "DEBUGD" that would display (or print) sections of a file. The start of the "GAZET_DBF" is shown in Figure 2. (See me for a copy of "DEBUGD".)

When I heard that the "Supermedia Manager" (SM) from Digital Precision would do what I wanted, I finally broke down and bought a disk drive (an 80 track DD, 5-1/4") and SM. This program has 58 different procedures that one can use to do lots of things with files. It can be used to repair corrupted files, "dump" disk or mdv sectors to the screen or printer, move sectors around, edit files byte by byte, and copy files generated by other (alien) computers. I tried the last one first. SM is menu driven, an item is picked from the main menu, and the sub-menu appears. For

"Alien disk file copier" one must first "Set Disk Drive and Alien Disk Type" on the sub-menu, with the SM disk in a drive. Once the drive is selected, a list of disk types appears. The first few are from BBC & Acorn (UK machines); the next several are MS-DOS (IBM) formats, single-sided, double-sided, 40 and 80 track. Only one of these is commonly used - #5, 40-track, DS-DD (360 Kb). Early MS-DOS versions used SS & maybe, SD, and some accessory 80-track (9-sector) drives have been added to some PC's, but they are rare. (The IBM-AT, HC, 1.2 Mb, 15-sector disk is not listed and can not be copied.) I made the #5 selection, and put my 40-track MS-DOS disk into the 80-track drive, and requested "Alien file transfer". A numbered directory of files on the MS-DOS disk appeared. After I picked the number of the file to copy, the program requested the target file-name (ram1_test, for this trial). The copying started - with the file also being written to the screen! The file I transferred was a short listing of FORTH code; it has only ASCII characters with no LF's or CR's. Since this seemed to work, I tried a larger Forth file, 190,592 bytes. I got a QL file of the same size (plus one byte), but half of it turned out to be garbage. The other half was good, but roughly every two sectors were not recognizeable, and a closer look showed that half the sectors started with "<TE>" which is SM message for transmission error. Finally after consulting experts, I concluded that I needed a 40-track disk drive for the transfer to work! (One expert said the disk interface is the problem, the other said no!) Such a drive is needed in spite of the fact that Q-DOS will read (but not write to) a 40-track disk in an 80-track drive. Weird system!? (Taylor's "IBM- DISK" also would not read a 40-trk in an 80-trk; he did display an error message in this situation.)

Next step - I borrowed a used 40-track drive (later, I bought it), and transfered a couple files to a QL disk. It worked! Then I tried a large file, one file equalled a full disk, 362,496 bytes. SM cut it off, at 347,136 bytes, exactly 30 sectors short. It also took 41 minutes to do it! In contrast, Taylor's program transferred the whole file, to the end (less the CR's), in ten minutes.

In summary, it is possible to transfer files from MS-DOS disks to QL files on disks, mdv's, or ram-disks with SM or, for text files, with "IBM-DISK", but the following precautions must be taken:

1) The MS-DOS disk must be in a drive with the same number of tracks that it is formatted to; i. e., 40-track for a 360 Kb disk (at least if a CST interface or Trump card is used).

2) With SM the transfer is unnecessarily slow because of the screen display. Digital Precision bugged this one!

3) Do not try to copy any files in the last 30 sectors of an MS-DOS disk with SM. Another bug, DP! Short or long files in those sectors are not copied. Use a PC to put files in such sectors in the early sectors of a fresh disk. IBM-DISK will copy from the last sectors, for text.

4) Neither program will handle the HC 15-sector IBM-AT disk.

Finally, why copy MS-DOS files to the QL? Hopefully, we can manipulate data, or even use certain program code, on the QL. Data files, from dBase, for example, might be converted to a form QL programs could use. Text from word processors might be reformatted to import into Quill to be edited, merged with other text, etc. Lastly, source code from high level languages, such as basic, Pascal, etc. should be convertable to a form that a QL interpreter or compiler can handle. I have already gotten Forth blocks transferred - I hope to get them loaded and running soon.

```
16CF:0160  00 00 00 00 71 71 01 00-00 00 0F 00 1A 00 FF 00   ....qq..........
16CF:0170  00 00 00 27 54 68 69 73-20 69 73 20 4C 6F 74 75   ...'This is Lotu
16CF:0180  73 20 31 2D 32 2D 33 00-0F 00 1A 00 FF 00 00 14   s 1-2-3.........
16CF:0190  00 27 44 75 6E 64 61 6C-6B 20 43 6F 6D 6D 2E 20   .'Dundalk Comm.
16CF:01A0  43 6F 6C 6C 2E 00 01 00-00 00 00 FF FF 00 00 2D   Coll...........-
16CF:01B0  00 B7 01 FF FF 00 00 FF-FF 00 00 FF FF 00 00 FF   ...............
16CF:01C0  FF 00 00 FF FF 00 00 FF-FF 00 00 FF FF 00 00 FF   ...............
```

Figure 1, Example of MS-DOS' DBUG Dump

```
Hex add 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

0000    00 14 76 72 6D 31 64 62-66 30 00 00 28 E7 03 CE   ..vrm1dbf0..(...
0010    00 26 00 D0 42 9C 00 00-00 00 00 00 43 DC 00 00   .&..B.......C...
0020    00 00 00 00 45 24 40 00-00 00 00 00 0B 41 46 47   ....E$a......AFG
0030    48 41 4E 49 53 54 41 4E-04 41 53 49 41 05 4B 41   HANISTAN.ASIA.KA
0040    42 55 4C 0B 50 55 53 48-54 55 2C 44 41 52 49 07   BUL.PUSHTU,DARI.
0050    41 46 47 48 41 4E 49 00-00 41 20 00 00 00 00 00   AFGHANI..A .....
```

Figure 2, DEBUGD of First Section of GAZET_DBF

# CATS to Have FORTH-coming Meeting

CATS software enthusiast DUANE H. PARKER will lead a special presentation on "Using the FORTH" language at the next CATS meeting Saturday, February 13, at 2 P.M.

FORTH is a somewhat exotic soft-ware language which has been implemented on all Sinclair products from the ZX-81 to the QL.

Duane will give us a general introduction to computer languages by comparing BASIC (which is interpreted) to Pascal (which is compiled). He will then give the group some insights into FORTH (a "threaded inter-preted" language).

Featured in this multi-media event will be 35-m.m. slides cre-ated by Duane, large-screen video enhancement of his live keyboard demonstrations and VCR excerpts from a seminar on FORTH given at last May's Computerfest in Indianapolis.

You will not want to miss this unique presentation.

Plan now to be there!

# Letters to the Editor

When the previous mass buys of the QL machines took place, members were promised they could legally make copies of the latest QL baseline software.

Supposedly these copies could then be used in lieu of the soft-ware which came (or sometimes didn't come) with the bargain-basement QLs.

However, this promise has been largely unfulfilled.

SUGGESTION: Why can't a hardware session be designated when people can come and copy the four microdrives of software? Blank microdrives could be available for purchase, and one or two QLs set up to do the copying.

Help from other members could be easily available then to help newcomers over the rocky shoals of QDOS.

What do you think. Editor?

Hank Dickson

Great idea, Hank. Lets shoot for the month after the Computerfest, April, to do this. Those that are going to need microdrives should line up your sources now as they are in short supply.
—Ed.

# the PLOTTER: Tips and programs for the plotter user     by Peter van Dijk

## EXPLANATION OF PROGRAM PLOT3.

This program draws turtle pictures to a monitor screen and to the EPSON HI-80 plotter.

The turtle procedures are based on the TURTLE_BAS program in the QUANTA library (disk 8). All the picture drawing routines are examples of SUPERBASIC recursive procedures. The program has a start menu and any keypress after a picture is drawn, will bring back this menu. The scale used for the screen drawings is chosen to match the plot size without need for rescaling.

Line 290 opens a channel to the plotter. If this line is replaced by line 310 the plotter commands are directed to a screen window for program testing. A plotter is not required after this change is made. To speed up screen drawing all plotter commands can be bypassed by deleting lines 180, 240, 420, 600, 780 and 900.

The program has 3 procedures for translating the SUPERBASIC turtle commands into x y coordinates, required for the plotter. Procedures P_TURN and P_TURNTO update the absolute drawing angle and reduce angles of more than 360 degrees to (360-alfa) degrees. The angle is used in procedure P_MOVE to calculate the next relative x and y coordinates.

```
100 REMark  TURTLE-PICTURES WITH
EPSON HI-80
110 REMark PROCEDURES BASED ON
"TURTLE_BAS", QUANTA LIBRARY (DISK
8)
120 WINDOW 512,236,0,0:PAPER 2
130 REPeat PROG
140 CLS:AT 10 ,20:PRINT '1)
NESTED_TRI'
150 PRINT TO 20,'2) SNOWFLAKE':PRINT
TO 20,'3) SIERPINSKI'
160 PRINT TO 20,'4) CEE':PRINT TO
20,'0) STOP';
170 INPUT  TO 40,INV:CLS
180 OPENER
190 SELect ON INV
200 =1:TRIANGLES:=2:SNOWFLAKE 1600,4
210 =3:SIERPINSKI
30,5:=4:CEE:=0:STOP
220 =REMAINDER
230 END SELect
240 CLOSER
250 PAUSE
260 END REPeat PROG
270 REMark **********
280 DEFine PROCedure OPENER
290 OPEN#3,SER2:REMark < OPEN
PLOTTER >
300 REMark < PLOTTER COMMANDS TO
SCREEN ONLY >
310 REMark OPEN#3,CON:WINDOW
#3,80,256,0,0:CLS#3:DF
320 PENDOWN:BETA=0
330 END DEFine OPENER
340 REMark **********
350 DEFine PROCedure
CLOSER:CH:CLOSE#3:END DEFine
360 DEFine PROCedure
MA(I,J):PRINT#3,'MA ';I;',';J:END
DEFine
370 DEFine PROCedure
DR(I,J):PRINT#3,'DR ';I;',';J:END
DEFine
380 DEFine PROCedure
CH:PRINT#3,'CH':END DEFine
390 REMark **********
400 DEFine PROCedure TRIANGLES
410 SCALE 1925,-500,-35:POINT
0,0:P_TURNTO 0
420 MA 100,20
430 NESTED_TRI 2112
440 END DEFine TRIANGLES
450 REMark **********
460 DEFine PROCedure
NESTED_TRI(size)
470 LOCal count
480 IF size<50
490 RETurn
500 ELSE
510 FOR count=1 TO 3
520 NESTED_TRI (size/2)
530 P_MOVE size:P_TURN 120
540 END FOR count
550 END IF
560 END DEFine NESTED_TRI
570 REMark **********
580 DEFine PROCedure SNOWFLAKE (size
,level)
590 SCALE 1920,-700,-475:POINT 0,0
600 MA 250,475
610 P_TURNTO 0
620 FOR count=1 TO 3
630 side size,level:P_TURN 120
640 END FOR count
650 END DEFine SNOWFLAKE
660 REMark **********
```

# CLASSIFIED ADS

## QUIKSORT

### by Courtney Du Bois

Timelinez, TSUGs of the SF Bay Area, Sept. 1987

Concluded from our January, 1988 issue

```
   5 REM    *** QWIKSORT ***
   7 REM BY COURTNEY DU BOIS
   9 FAST
  10 LET N=1000
  15 DIM K(N)
  20 FOR E=1 TO N
  30 LET K(E)=INT (RND*100+1)
  40 NEXT E
  50 GOSUB 1000
  60 STOP
1000 REM INITIALIZE STACK
1004 LET S=INT ((LN N)/(LN 2))
1006 DIM L(S)
1008 DIM U(S)
1009 REM STACK ENTIRE ARRAY
1010 LET T=1
1020 LET L(T)=1
1030 LET U(T)=N
2000 REM SORT
2005 REM STACK EMPTY?
2010 IF T THEN GOTO 2040
2020 PRINT "DONE"
2030 RETURN
2035 REM UNSTACK BOUNDARY INFO
2040 LET L=L(T)
2050 LET U=U(T)
2060 LET T=T-1
2065 REM ANYTHING IN SUBSET?
2070 IF U<=L THEN GOTO 2010
2080 GOSUB 3000
2090 GOTO 2070
3000 REM PARTITION SUBTABLE
3010 LET I=L
3020 LET J=U
3030 LET K=K(I)
4000 REM COMPARE - MOVE LEFT
4010 IF K>=K(J) THEN GOTO 4040
4020 LET J=J-1
4030 GOTO 4010
4035 REM HAVE KEYS CROSSED?
4040 IF J>I THEN GOTO 4070
4045 REM RESTORE KEY
4050 LET K(I)=K
4060 GOTO 6000
4070 LET K(I)=K(J)
4080 LET I=I+1
5000 REM COMPARE - MOVE RIGHT AND
     WATCH OUT FOR RIGHT EDGE
5010 IF K<K(I) OR I>=N THEN GOTO
     5040
5020 LET I=I+1
5030 GOTO 5010
5040 IF J<=I THEN GOTO 5080
5045 REM SWAP AND MOVE RIGHT
5050 LET K(J)=K(I)
5060 LET J=J-1
5070 GOTO 4000
5075 REM RESTORE KEY
5080 LET K(J)=K
5090 LET I=J
6000 REM STACK LARGER SUBSET
6010 LET T=T+1
6020 IF I-L<U-I THEN GOTO 6070
6025 REM STACK LEFT SUBSET
6030 LET L(T)=L
6040 LET U(T)=I-1
6050 LET L=I+1
6060 GOTO 6100
6065 REM STACK RIGHT SUBSET
6070 LET L(T)=I+1
6080 LET U(T)=U
6090 LET U=I-1
6100 RETURN
```

---

**THE MISSING 3 LINES**

```
610 LINE X,Y

620 MA X,Y

630 LINE_R TO 200,100 TO 0,-200 T
O -200,100
```

---

# The Capital Area Timex Sinclair Users Group

is a not-for-profit group devoted to serving the interests of those who own, use, or are interested in the Timex/Sinclair family of computers.

## Executive Board

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CATS maintains a gratis exchange of newsletters with approximately 30 Users groups across the U.S. Clubs not sending a n/l to us for six months are automatically taken off the list.

## Meetings

Monthly meetings are held from 11 AM to 5 PM, on the second Saturday of each month, at the New Carrolton Public Library.
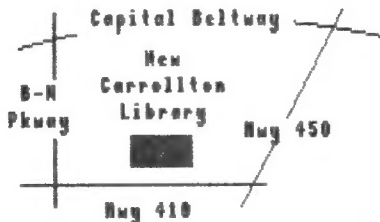
## Newsletter

Memberships cost $18 per year, are good for 12 months, and include all privileges (access to libraries, group buys, etc.). A newsletter subscription only is available for $12 per year.

## Networks

Timex SIG on Compuserve: Wednesday night, 10 P.M. Eastern time (GO CLUB).
CATS BBS: (505) 522-7081 FIDO net 15, node 6. East Coast dial (703) 547-4815 FIDO net 18, node 9.

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CATS Newsletter
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The next meeting of CATS will be held on:

Saturday, February 13, 1988    11:00 AM Hardware Meeting
                                2:00 PM General Meeting

At: New Carrollton Public Library
7414 Riverdale Road (Hwy 410), New Carrollton, MD

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECEIVE

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